

Why Clinical Groupware May Be the Next Big Thing in Health IT

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What would you call health care software that:

- Is Web-based and networkable, therefore highly scalable and inexpensive to purchase and use;
- Provides a 'unified view' of a patient from multiple sources of data and information;
- Is designed to be used interactively - by providers and patients alike - to coordinate care and create continuity;
- Offers evidence-based guidance and coaching, personalized by access to a person's health data as it changes;
- Collects, for analysis and reporting, quality and performance measures as the routine by-product of its normal daily use;
- Aims to provide patients and their providers with a collaborative workflow platform for decision support; and
- Creates a care plan for each individual and then monitors the progress of each patient and provider in meeting the goals of that plan?

I call this Clinical Groupware. The term captures the basic notion that the primary purpose for using these IT systems is to improve clinical care through communications and coordination involving a team of people, the patient included. And in a manner that fosters accountability in terms of quality and cost.

Clinical Groupware is a departure from the client-server and physician-centric EHR technology of the past 25 years, a fixed database technology that never really became popular. It is a substantially new and disruptive technology that offers lower price of purchase and use, greater convenience, and is capable of being used by less skilled customers across a broader range of settings than the technology it replaces.

As the name indicates, Clinical Groupware is intended for use by groups of people and not just independent practitioners or individuals. It is not the same thing as an electronic health record, but may share a number of features in common with EHRs, such as e-Prescribing, decision support, and charting of individual visits or encounters, both face-to-face and virtual. Neither is Clinical Groupware bloated with extra features and functions that most providers and patients don't need and, with good reason, don't want to pay for.

Some Clinical Groupware may look and feel like a web-based "EHR lite." But Clinical Groupware aims to create a unified view of the patient, assembling health data and information that may be stored in many different places and in several different organizations - including HealthVault or Google Health -- which most EHRs cannot do.

Clinical Groupware is an evolutionary approach to a shifting health economy in which doing more is not always equated with better care, and the physician or provider role is transforming from autonomous expert to advisor, partner, and guide. It is also an organic response to the reality that most health care data in electronic format is dispersed across numerous organizations and companies - e.g. hospitals, labs, pharmacies, and devices - and provides a means of accommodating patient demands for a more participatory practice of medicine.

Let me give a couple of examples of this new and emerging class of health software. RMDNetworks (Denver, CO) and Shared Health (Chattanooga, TN) both offer early examples of Clinical Groupware, although their origins and feature sets are different. RMDNetworks is a privately owned software company that started life as a web portal through which patients and doctors might securely communicate about care. Shared Health is a claims-based health records and quality improvement system for physicians, and is a wholly owned subsidiary of Blue Cross/Blue Shield of Tennessee.

(Full disclosure: I am a member of the Board of Directors of Shared Health, and have been a consultant to RMDNetworks. Although I could write about this subject using other companies as examples, my insights would be less accurate and well-informed. I'll leave it to readers to determine my bias level, and react accordingly. Let me also say that several traditional EHR companies and web portal firms are evolving in the direction of Clinical Groupware, among them eClinicalWorks, RelayHealth, MedFusion, and AthenaHealth.)

Shared Health is a free web-based, highly secure application that offers physicians and medical personnel access to summary health information on their patients who are BCBS of Tennessee members, Medicaid beneficiaries, or employees of several corporations in Tennessee who have signed up to allow their doctors access to their health information. Claims data can be quite rich in detail, consisting of coded diagnoses and problems, medication prescribing and fulfillment information, and lab tests. And this is important: Doctors who use Shared Health's web-app, known as Clinical Xchange, can access information on ALL encounters by a patient with ALL providers, such as emergency room visits or new medications, not just the information in the doctor's own paper charting system or EMR.

The Shared Health team has over time added features that doctors using the system have requested, such as e-Prescribing, pediatric annual visit charting, and reminders and alerts known as Clinical Opportunities. These preventive health measure and screening reminders are generated algorithmically based on evidence-based guidelines, and can help physicians and practices bring their standard of care up to the levels required for pay-for-performance bonus through BCBS and Medicaid. Examples include lab tests for diabetes and mammograms for women over fifty. Very little data entry is required of the physicians or practices, and a good deal of effort has gone into making the Clinical Xchange application an "always on" and workflow-friendly component of the doctors' desktops.

RMDNetworks' application is also web-based and low cost to providers who use it. However, the organizing principle behind RMD is direct communications among providers who are caring for the same patient, and between providers and their patients, with a focus on chronic care management. RMD's application is oriented towards the physicians and patients in a physical geographic area, a single community, in which care is likely to be based in medical home practices and nearby specialty clinics, imaging or lab facilities, and one or more local hospitals. However, they are also tying into broader state initiatives for health data exchange and care coordination.

RMD has partnered with some innovative programs and projects, such as the [Colorado Clinical Guideline Collaborative](#) and their Collaborative Care Network, a demonstration project involving 15 medical home practices in the Denver area that have agreed to implement guideline-level care using RMD's registry functionality for patients with diabetes, hypertension, hyperlipidemia, and fourteen other conditions.

Patient engagement is encouraged through RMD's web portal, permitting patients to access their health information and see explicit care plans and graphs of their progress, receive reminders regarding medications and exams, and transfer their records anywhere, anytime. Doctors using RMDNetworks have the advantage of seeing a single care plan for each patient, with scheduled labs and tests checked off as they are done by any of the providers.

This may permit teams of providers to avoid duplicating each others' tests or procedures, a common occurrence for Medicare patients who may see as many as six or seven different doctors each year and whose care is seldom coordinated. RMDNetworks and Shared Health are imperfect, early examples of Clinical Groupware, and any knowledgeable observer would be able to point to a number of obstacles that stand in the way of their more general use by physicians and groups.

For example, Shared Health's application does not yet integrate with practice-based or hospital EHRs, an interface that would allow two-way flow between the practice's clinical data and the claims information stored in Shared Health's centralized repository.

RMDNetworks has not yet integrated e-Prescribing into its offering, and has a number of interface issues of its own to handle. But I predict that this class of software will quickly improve, particularly with respect to data sharing, and that as it does it is likely to grow in adoption especially where cross-organizational and inter-enterprise platforms are seen as a lower cost and more easily implemented solution than adopting a single vendor EHR, or building an expensive RHIO-like centralized repository.

Clinical Groupware may never replace an enterprise EHR like Epic or NextGen, but it may serve the needs of groups of practices, and groups of groups, who seek clinical integration and collaboration without financial integration being a prerequisite.

There is definitely a social networking ambiance to Clinical Groupware that EHRs have totally lacked so far. The recent passage of the Health Information Technology for Economic and Clinical Health Act, or HITECH, may give Clinical Groupware an unexpected boost in popularity. This is because HITECH defines physician eligibility for direct incentive payments in terms of broad "meaningful uses" of health IT, rather than through prescribed products or features and function sets of particular products.

According to the bill, a physician becomes eligible for significant federal funding by using qualified technology to: 1) perform e-Prescribing; 2) carry out "the electronic exchange of health information to improve quality of care, such as promoting care coordination," and; 3) report on clinical quality measures in the form and manner specified by the Secretary of HHS.

Furthermore, the bill states that: "The term 'qualified electronic health record' means an electronic record of health-related information on an individual that (A) includes patient demographic and clinical health information, such as medical history and problem lists; and (B) has the capacity to provide clinical decision support; support physician order entry; capture and query information relevant to health care quality; and to exchange electronic health information with, and integrate such information from other sources.

"These requirements open the door to health IT implementation in provider organizations that is less expensive and easier to use than today's EHRs.

Clinical Groupware like that offered by Shared Health and RMDNetworks both provide "meaningful use" of a "qualified EHR" under the Bill, at least as I understand it. At the same time as this new term comes into fashion, I think that the electronic health record, or EHR, will begin to fade. It is already losing its utility, burdened by several different meanings and definitions that confuse almost everyone.

For example, EHR means to some people a suite of software used by doctors to replace paper records, as in those products that are certified by CCHIT according to features and functions. To others, an EHR is a collection of data about an individual, a digital file or files.

And to some, it means both. But the real issue isn't about confusing old names or catchy new ones. The real issue is the choices that will be made by the 75 percent of physicians who don't use EHRs yet.

Clinical GroupWare will appeal to these physicians, medical practices, hospitals, and provider organizations who have hesitated from purchasing the high priced comprehensive EHR database management systems on the market; who don't require all the features and functions that these systems offer (and don't want to pay for un-used functionality); and who wish to implement quickly and with as little interruption to clinical workflows as possible.

Because Clinical GroupWare is web-based and can be used with any of the popular browser programs, such as Internet Explorer and Firefox, the viewer interface is already familiar and does not require extensive user orientation or training.

Clinical GroupWare integrates some of the most common features of office software used in work outside of health care and in the home -- such as e-mail, scheduling, data/table display, and forms completion -- rather than retaining complex multi-click document constructions that are proprietary and customized.